

## ABSTRACT

The present invention provides a supramolecular structure produced by the process comprising reacting a multi-generation dendrimer with a monomer, where the dendrimer comprises a core molecule, a plurality of interior generations spherically disposed around the core molecule and an outermost generation comprising a plurality of dendritic branches having terminal groups sufficiently reactive to undergo addition or substitution reactions, where the monomer introduces a labile bond and at least one cross-linkable moiety to the terminal groups of each dendritic branch, and where the cross-linkable moiety is bonded to the terminal group via the labile bond; crosslinking the cross-linkable moieties of adjacent dendritic branches; and cleaving the labile bonds, thereby freeing the dendrimer and forming a molecule encapsulated within a cross-linked shell molecule. The present invention further provides a process for the production of the supramolecular structures.